V&V Summary Report
L2 ASCDS Version : 10.4.1

Observation 17309 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Sep 20 2015

See axaff17309N001_VV002_vvref2.pdf for the full report

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2018.03.06
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	51.756279474139

Comments

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Roll preference met.
Optional chip S2 was dropped.
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The focal plane temperature during part of this observation was warmer
than the upper limit for optimum calibration of the ACIS gain and
spectral resolution (i.e., -114.0 C for ACIS-I and -112.0 C for
ACIS-S).
The Chandra calibration team calibrates the ACIS gain and spectral
resolution using data from the external calibration source (ECS). ECS
data show that the frontside-illuminated (FI) CCDs are more temperature
sensitive than the backside-illuminated (BI) CCDs.
A summary of the current calibration status of the ACIS gain and
spectral resolution can be found at:

http://asc.harvard.edu/cal/Acis/Cal_prods/Gain_and_Spectral_Resolution/A
CIS_response_summary.html

The main points are:
1) The gain on BI chips remains within 0.3% (i.e., the systematic
uncertainty in the ACIS gain quoted on the Chandra Calibration Status
Summary web page) at all measured temperatures.
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2) The gain on FI chips remains within 0.3% below row 600 at all measured temperatures.
3) The gain on FI chips above row 600 can be underestimated by as much as 1% for focal plane temperatures exceeding -116 C.
4) The spectral resolution (i.e., FWHM) on BI chips is insensitive to the focal plane temperature.
5) Warmer focal plane temperatures increase the FWHM on FI chips by up to 30 eV near row 512 and by up to 70 eV near the top of the chips.
In summary, the user should be cautious in the spectral analysis of high S/N emission lines detected on the top half of FI chips in this observation. Default processing with the current version of the CALDB will underestimate photon energies by up to 1% and broaden emission lines by up to 70 eV.

seq_num	901167	Sequence number
obs_id	17309	Observation id
title	Black Hole Fingerprints from Cosmic Dawn to Cosmic Noon	Proposal t
observer	Prof. Guenther Hasinger	Principal investigator
object	UDS	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	34.39048	Observer's specified target RA [deg]
dec_targ	-5.092083	Observer's specified target Dec [deg]
ra_nom	34.389027793008	Nominal RA [deg]
dec_nom	-5.0821526713654	Nominal Dec [deg]
roll_nom	79.208560490158	Nominal Roll [deg]
revision	1	Processing version of data
ontime	51756.279474139	Sum of GTIs [s]
livetime	51080.045580391	Livetime [s]
ontime0	51756.15635407	Sum of GTIs [s]
ontime1	51759.33846426	Sum of GTIs [s]
ontime2	51756.238423944	Sum of GTIs [s]
ontime3	51756.279474139	Sum of GTIs [s]
ontime7	51759.46158421	Sum of GTIs [s]
l2events	262551	Number of level 2 events